Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	
5GAA Petition for Waiver to Allow Deployment of Cellular Vehicle-To-Everything (C-V2X) Technology in the 5.9 GHz Band	GN Docket No. 18-357
Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band	ET Docket No. 13-49

COMMENTS OF NCTA—THE INTERNET & TELEVISION ASSOCIATION

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I. INTRODUCTION AND SUMMARY

The 5.9 GHz band represents the best near-term opportunity to advance the next generation of broadband, with Gigabit Wi-Fi speeds and capacity that will drive U.S. broadband access, economic growth, and the 5G transition. Because of these benefits, the Federal Communications Commission is in the midst of an active proceeding to determine the future of the band.[1] For more than five years, Commission staff, other government agencies, NCTA – The Internet & Television Association,[2] and companies across many industries have been working to

[1] *Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, Notice of Proposed Rulemaking, 28 FCC Rcd. 1769 (2013) (2013 NPRM).

[2] NCTA is the principal trade association of the cable television industry in the United States, representing cable television operators, programmers, and equipment manufacturers. The cable industry is a leading provider of residential broadband service to U.S. households and has invested more than $290 billion over the last two decades to deploy and continually upgrade networks and other infrastructure— including building some of the nation's largest Wi-Fi networks.

establish comprehensive new rules to fix the failed technology-specific spectrum policy that has left the band almost completely unused.[3] The ongoing 5.9 GHz proceeding provides parties with ample opportunity to advocate for coordinated changes to the FCC's rules to permit the use of new technologies in response to the failure of Dedicated Short Range Communications (DSRC) services.[4] 5GAA, however, asks the Commission not only to work outside of this proceeding but also to risk repeating the mistakes that made this review necessary.

As numerous parties have recognized, the current technology-specific, command-and-control rules for the 5.9 GHz band are inconsistent with modern spectrum policy and have not kept pace with changes in the technology and spectrum landscape. In 1999, the FCC took the unusual step of picking a technology and granting certain companies the right to exclude all other uses without an auction for licenses and without the sharing responsibilities that accompany unlicensed access. It is no surprise that this now-rejected "beauty contest" approach to spectrum allocation failed. After two decades, DSRC has not succeeded in the marketplace—but the FCC's rules governing the 5.9 GHz band nonetheless still preclude the marketplace from determining its best use.[5] It makes sense that proponents of C-V2X technology, an alternative to DSRC that is not currently permitted to operate in the 5.9 GHz band, would seek transformative

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3 *See The Commission Seeks to Update and Refresh the Record in the "Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band" Proceeding*, Public Notice, 31 FCC Rcd. 6130, 6130–31 (2016) (describing work by numerous stakeholders as of 2016).

4 *See, e.g.*, Letter from Rick Chessen, Chief Legal Officer, The Internet & Television Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 13-49 (filed Oct. 16, 2018) (requesting that the Commission issue a Further Notice of Proposed Rulemaking in the 13-49 docket) (NCTA Ex Parte).

5 *See, e.g.*, 47 C.F.R. § 2.106 Table of Frequency Allocations, Non-Federal Government Footnote NG160.

changes to those rules. It is unusual and inappropriate, however, that 5GAA would ask the Commission to take this significant step in the guise of a waiver proceeding.

5GAA's waiver request is, in truth, a thinly veiled petition for rulemaking: a request to substantially overhaul the 5.9 GHz band that would have long-term, wide-ranging impacts on the larger proceeding and prematurely tie the FCC's hands in important ways.[6] Considering such fundamental changes in the context of a waiver request—and outside the Commission's ongoing proceeding on the 5.9 GHz band—would unnecessarily and inappropriately circumvent the rulemaking process and call into question the legality of the Commission's actions. The Commission should reject 5GAA's effort to short-circuit the Commission's procedures and consider 5GAA's proposed rules only as part of a comprehensive Further Notice of Proposed Rulemaking (FNPRM).

II. 5GAA SEEKS THROUGH A "WAIVER" REQUEST WHAT THE COMMISSION SHOULD ADDRESS THROUGH ITS FORMAL RULEMAKING PROCEDURES.

The Commission may exercise its discretion to grant a waiver "where particular facts would make strict compliance inconsistent with the public interest,"[7] and "only if special circumstances warrant a deviation from the general rule."[8] Because 5GAA is requesting fundamental changes to the basic regulation of the band—not permission to avoid "strict compliance" with those rules—the 5GAA Petition does not meet the Commission's standard for

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6 *See* 5GAA Petition for Waiver, GN Docket No. 18-357 (filed Nov. 21, 2018) (5GAA Petition).

7 *AT&T Corp. v. FCC*, 448 F.3d 426, 433 (D.C. Cir. 2006) (quoting *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990)).

8 *Northeast Cellular*, 897 F.2d at 1165–66 (finding an FCC decision to grant a waiver "arbitrary and capricious because it was not based on any rational waiver policy").

waiver requests and would be more appropriately addressed through a formal rulemaking process.

A. 5GAA's waiver inappropriately requests broad and permanent rules of general applicability.

The 5GAA Petition, which would fundamentally and permanently rewrite the rules of the band, is too broad in scope and duration to be resolved through a waiver proceeding.[9] 5GAA describes its request as a "blanket waiver, with conditions, of footnote NG160," in the FCC's table of allocations, which limits non-federal mobile use of the 5.9 GHz band to DSRC operations in the Intelligent Transportation System (ITS) service.[10] That description is, at best, incomplete. To facilitate C-V2X operations in the 5.905–5.925 GHz band, the Commission would need to change the two defining rules for the band: (1) its limitation that licensees use only DSRC and (2) its establishment of a channelization plan. As 5GAA recognizes, that is a significant overhaul.[11] Numerous provisions in Part 90 and Part 95 of the Commission's rules expressly or by implication prohibit non-DSRC operations in the 5.9 GHz band and must be changed to accomplish 5GAA's goals. For example, Section 90.377 limits the use of channel 184 (5.915–5.925 GHz) to "public safety applications involving safety of life and property" by "entities [that are] eligible to hold an authorization to operate Roadside units in the DSRC"

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9 *See Numbering Policies for Modern Commc'ns*, Notice of Proposed Rulemaking, Order and Notice of Inquiry, 28 FCC Rcd. 5842, ¶ 96 (2013) (granting waiver of rules regarding access to telephone numbers because the waiver was "very limited in scope and duration" and did "not prejudge the outcome" of a related NPRM proceeding).

10 5GAA Petition at 1.

11 *See* 5GAA Petition at 21 n.48 (noting that it may be more appropriate to waive "Sections 90.375, 90.377, 90.379, 95.3159, 95.3163, 95.3167, 95.3189, and any others the Commission views as barriers for the deployment of C-V2X.").

service.[12] Granting the 5GAA Petition would require altering (1) the channelization plan to combine channels 182 and 184 into a single 20-megahertz channel, (2) the restriction to DSRC operations, and (3) the limited categories of authorized users.

5GAA's "proposed conditions" are really incomplete proposed rules that fundamentally rewrite those provisions.[13] For example, the petition proposes a new out-of-band emissions limit without any analysis of how that change would impact existing incumbent operations or the Commission's pending proposals for the 6 GHz band.[14] Because, as described below, 5GAA proposes that C-V2X operations would completely replace DSRC operations at the top edge of the 5.9 GHz band, this new OOBE rule would not just apply to a limited class of devices operating under a waiver. All devices operating in the top two channels would be subject to this "condition." Thus, granting the 5GAA Petition would rewrite the protections for adjacent band users without the technical vetting a rulemaking proceeding would provide.

The 5GAA Petition makes clear that its real intent is to re-write the Commission's rules to eliminate the existing mobile service from the 5.905–5.925 GHz portion of the band—a significant change that is inappropriate for a waiver request. The 5GAA Petition states that C-V2X and DSRC operations cannot occur on the same channel.[15] It follows, then, that if the Commission adds C-V2X operations to any portion of the band, it must also remove DSRC. That goes beyond just allowing C-V2X to operate out of strict compliance with the current rules

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[12] 47 C.F.R. § 90.377(b) n.4; *id.* § 90.373(a).

[13] *See* 5GAA Petition at 28–30; *id.* at App. D.

[14] *Id.* at 29.

[15] *Id.* at 28 ("Because C-V2X and DSRC operations will occur on different channels, each technology will be protected from interference from the other.").

and far beyond a simple footnote change, and renders the waiver request inconsistent with the FCC's requirement that a waiver "not undermine the validity of the general rule."[16]

Consistent with that intent to reshape the 5.9 GHz band permanently, 5GAA's request includes no time limit on the proposed waiver and would lock in long-term or even permanent consequences for the 5.9 GHz band that are inconsistent with proposals the Commission is considering in an active rulemaking.[17] Rulemakings, not waivers, should establish long-lasting federal communication policy, especially when a rulemaking is already underway. As the Department of Transportation (DOT) has explained, fleet-wide adoption of a vehicle-to-vehicle (V2V) technology is a process that will take 40 years, because many new cars sold today will still be on the road decades from now.[18] If the Commission grants the 5GAA waiver request, some automakers will presumably begin promising consumers new vehicle-to-vehicle communications functionality based on that waiver. The cars that consumers buy on the basis of those promises will be on the road for decades—even if the Commission decides to adopt a different plan for the 5.9 GHz band in the pending proceeding.[19] The Commission can avoid the resulting consumer confusion, stranded investment, and regulatory uncertainty by handling 5GAA's proposal through the ordinary rulemaking process that results in permanent rules.

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16 *Space Expl. Holdings, LLC*, Memorandum Opinion, Order and Authorization, FCC 18-161, 2018 WL 6075368, at *5 (rel. Nov. 19, 2018).

17 *See, e.g.*, *Robert D. Augsberg*, Letter, 29 FCC Rcd. 11287, ¶ 4 (Media Bur. 2014) (denying waiver request because of "potentially far-reaching effects").

18 Federal Motor Vehicle Safety Standards; V2V Communications, 82 Fed. Reg. 3854, 3987 (Jan. 12, 2017).

19 *See* 5GAA Petition at 26 (explaining that C-V2X chipsets will be available beginning in 2019).

Finally, the Commission should recognize 5GAA's attempts to underplay the negative effect of the proposed waiver. 5GAA asserts both that the waiver "is not expected to disturb existing commercial DSRC operations"[20] and that existing DSRC operations in the 5.905–5.925 GHz portion of the band will be required to "either transition to lower DSRC channels or use C-V2X technology."[21] 5GAA should explain how both of those statements can be true in the rulemaking proceeding. But given the significant changes that 5GAA's request necessitates, a petition for waiver is not the appropriate vehicle for this action.

B. Granting 5GAA's request would prejudge the outcome of the Commission's broader reconsideration of the rules for the 5.9 GHz band, inconsistent with Commission practice.

The Commission has a practice of denying waivers when granting the requested relief would "prejudge the outcome" of a pending proceeding.[22] As the Commission has explained, complex questions that do not "lend themselves well to decision in the context of one waiver

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[20] *Id*. at ii.

[21] *Id.* at 28 n.74 ("5GAA is aware of pilots involving DSRC Roadside Units which use all or a portion of the 5.905–5.925 frequencies for support. 5GAA will engage in discussions with the parties involved with these pilots to ensure that any operations using any portion of 5905–5925 MHz can either transition to lower DSRC channels or use C-V2X technology."); *see also* American Association of State Highway and Transportation Officials (AASHTO) Comments at 3, GN Docket No. 18-357 (filed Jan. 11, 2019) (requesting "a more detailed description [of] how 5GAA intends to engage with state DOTs in transitioning current and planned DSRC-based operations in Channels 182 and 184").

[22] *See Numbering Policies for Modern Commc'ns*, 28 FCC Rcd. at 5881; *Robert D. Augsberg*, 29 FCC Rcd. at 11291; *see also Freepage Corp*., Order, 15 FCC Rcd. 2556, ¶ 7 (Wireless Telecomms. Bur. 2000) (denying a party-specific waiver of rules related to the Paging and Radiotelephone Service because granting the waiver "could prejudge the Commission's actions" in a pending rulemaking that could modify or eliminate the relevant rules); *cf. Telesat Canada*, Order and Declaratory Ruling, FCC 18-163, 2018 WL 6075370, at *6 (rel. Nov. 19, 2018) (deferring request for access to the 50.4–51.4 GHz band until "sharing between terrestrial and satellite operations in the band, as well as other uses of the band, are addressed in the context of the *Spectrum Frontiers Proceeding*"); *Space Expl. Holdings, LLC*, 2018 WL 6075368, at *6 (same).

request alone" are better suited to rulemaking proceedings where the Commission can give "comprehensive consideration" to the issues.[23] For that reason, the Commission generally avoids allowing parties to use a petition for waiver to circumvent a rulemaking process, as 5GAA attempts to do here.

For example, the International Bureau adopted that approach in response to a request from ICO Satellite Services for a waiver of a requirement that Mobile Satellite Services (MSS) be commercially available before ancillary terrestrial component (ATC) operations begin.[24] The Bureau rejected ICO's waiver request because allowing ICO "to commence providing ATC before completing a nationwide rollout of MSS would prejudge issues the Commission is considering in the Further Notice of Proposed Rulemaking proposing to amend the rules to allow 2 GHz MSS systems to commence providing both MSS and ATC in markets where BAS/CARS relocation has occurred."[25] Instead, the Bureau referred the ICO request "for resolution in connection with the ongoing rulemaking."[26] Similarly, the Media Bureau declined an FM translator station's request for a waiver that would allow the station to make non-adjacent channel and transmitter site changes using a minor change application. The Bureau concluded that a waiver was "not the proper forum to address AM revitalization public policy goals, given that the Commission has recently undertaken a comprehensive examination of this matter" and

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23 *Request for Waiver of the 'Off-Network' Restrictions of the Prime Time Access Rule (Section 73.658(k)(3)) for the 'America' Series (Petition of Hughes Television Network & Needham, Harper & Steers Advert., Inc., As Agent for Xerox Corp.),* Memorandum Opinion and Order, 40 F.C.C.2d 139, 142 (1973).

24 *New ICO Satellite Servs. G.P.*, Order and Authorization, 24 FCC Rcd. 171, ¶ 33 (Int'l Bur. 2009).

25 *Id.*

26 *Id.*

that "it would not be appropriate for the Bureau to prejudge the outcome of the AM revitalization proceeding."[27] In each of the cases, the Bureaus recognized that granting the requested waiver would mean resolving issues of general applicability more appropriately addressed in a rulemaking.

Here, the 5GAA Petition would clearly prejudge—and prejudice—the outcome of the ongoing proceeding on the future of the 5.9 GHz band. DSRC proponents continue to assert that they need the entire 5.9 GHz band.[28] NCTA, on the other hand, has proposed that the entire band should be reallocated for unlicensed operations. If two channels are reserved exclusively for C-V2X operations, as 5GAA requests, neither of those proposals could be adopted without reversing the very action the Commission would have just taken, causing significant and unnecessary turmoil.

To justify proceeding with a waiver before final rules for the 5.9 GHz band are determined, 5GAA points to two inapposite waivers: one in the 77–81 GHz band and a second granted to the iRobot Corporation.[29] Neither of those waivers is comparable to 5GAA's proposal. In the 77–81 GHz case, the Commission was considering an NPRM that would modify the Commission's rules to allow tank level probing radar (TLPR) devices to operate in the band on an unlicensed basis. The Commission also granted waivers that "permit[ted] TLPR

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[27] *Robert D. Augsberg*, 29 FCC Rcd. at 11291.

[28] Comments of NXP USA, Inc. at ii, GN Docket No. 18-357 (filed Jan. 29, 2019) ("[T]he Commission should make clear that it has no intention of reallocating spectrum in the 5.9 GHz band for any purpose.").

[29] 5GAA Petition at 26 n.67 (citing *Amendment of Part 15 of the Commission's Rules to Establish Regulations for Tank Level Probing Radars in the Frequency Band 77–81 GHz*, Notice of Proposed Rulemaking and Order, 25 FCC Rcd. 601 (2010) (77–81 GHz Waiver) and *iRobot Corporation Request for Waiver of Section 15.250 of the Commission's Rules*, Order, 30 FCC Rcd. 8377 (OET 2015) (iRobot Waiver)).

devices to be certified to operate in this band pending the conclusion of [a] rule making . . . ."[30] Importantly, the waiver added TLPR operators to the band on a Part 15 sharing basis that required them to avoid causing harmful interference to existing users of the band. The Commission did not give TLPR operators the change that 5GAA seeks: to undermine the validity of the general rule by replacing one existing type of licensee with a new type of licensee and changing the channelization plan.[31] The grant of the 77–81 GHz waiver to allow unlicensed operation did not change the rules that applied to incumbent services. Similarly, the iRobot waiver allowed robotic lawnmowers access to the 6240–6740 MHz band, again on a Part 15 unlicensed basis.[32] Nothing in the waiver undermined the validity of the general rule by changing the rights of existing users or giving iRobot exclusive access to any part of the 6 GHz band. Thus, neither of the examples 5GAA cites contemplated the kind of sweeping proposal that 5GAA makes here to remove existing 5.9 GHz band users and replace the channelization plan.[33]

III. GRANTING 5GAA'S REQUESTED WAIVER IS NOT IN THE PUBLIC INTEREST.

A. Interfering with the ongoing 5.9 GHz proceeding is not in the public interest.

5GAA's proposals would tie the Commission's hands, and risk repeating the mistakes of the past, just as the FCC is taking a comprehensive look at the future of the 5.9 GHz band. Five years ago, it was already clear that the 5.9 GHz band was woefully underutilized, and the

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30 77–81 GHz Waiver ¶ 25.

31 *Id.* ¶ 34.

32 iRobot Waiver ¶ 3.

33 *See* Comments of IEEE 802 at 6, GN Docket No. 18-357 (filed 17 Jan. 2019) (opposing 5GAA's petition because "[a] waiver can be used to relieve a party from the requirement to satisfy certain rules but cannot be used to deprive licensed users of the right to continue operating with the rules under which they were deployed").

Commission began a proceeding to consider how to improve the band's utility, including proposals to bolster wireless broadband by opening the band for unlicensed use.[34] Since then, the failure of DSRC in the marketplace has continued. As a result, every day, nearly everywhere in the country, the 5.9 GHz band continues to sit idle.

As NCTA explained in its October 2018 ex parte letter, the time is right for the Commission to take a fresh look at the entire 5.9 GHz band and to consider reallocating some or all of the spectrum for unlicensed use.[35] Wi-Fi, which relies on unlicensed spectrum, is integrated into the core of U.S. business, enabling small and large entities to deliver essential services like healthcare monitoring, connected medical devices, networking and connectivity for universities, military bases and other large institutions, and billions of dollars in secure financial transactions. Wi-Fi is also central to American consumers' everyday lives, supporting home security, connected education, in-car navigation and entertainment services, and remote connectivity for less densely populated communities. As a result, unlicensed spectrum bands are the most productive commercial frequencies available, yielding tremendous innovation and investment.

Because consumers, companies, and institutions increasingly rely on Wi-Fi and other critical unlicensed technologies to connect, produce, and access information, there is broad consensus in Congress and among a variety of industries that more unlicensed spectrum is urgently needed to avert exhaustion of existing unlicensed bands and to keep pace with the rapidly growing demand.[36] The 5.9 GHz band remains the ideal spectrum to meet these needs.

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[34] 2013 NPRM ¶ 2.

[35] NCTA Ex Parte at 6–7.

[36] *See* 47 U.S.C. § 1502 (a)(2)(A) (directing federal regulators to identify at least 100 megahertz of new spectrum below 8 GHz for unlicensed uses); Steve Methley & William

It is optimally positioned adjacent to the workhorse U-NII-3 band and the 6 GHz band, which the Commission is considering for unlicensed use.[37] This means opening the 5.9 GHz band for unlicensed use will create a contiguous 160-megahertz channel that will facilitate Gigabit Wi-Fi speeds using the latest Wi-Fi standards. Accordingly, the best course of action is for the Commission to make the entire 75 megahertz available for unlicensed operations.

Recent technical work confirms that the 5.9 GHz band is ripe for re-designation even if the Commission decides to retain a portion of the band for future automotive safety-of-life operations. In October, the Office of Engineering & Technology (OET) released results of testing that demonstrates that (1) Wi-Fi can safely operate in the 5.9 GHz band without causing harmful interference, and (2) segmenting the band to provide at least 45 megahertz for unlicensed operations provides the most protection for safety-of-life DSRC applications.[38] OET concluded that band segmentation would "offer a means for [unlicensed] devices to coexist with DSRC devices."[39] In particular, the testing demonstrated that "the probability of interference due to adjacent channel operation" of unlicensed and DSRC devices was "considerably less" than the already low likelihood of harmful interference from co-channel operation.[40] Without

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Webb, Quotient Assocs. Ltd., Wi-Fi Spectrum Needs Study 26 (2017) (concluding that between 788 megahertz and 1.6 gigahertz of new mid-band spectrum will be needed by 2025 to satisfy demand for Wi-Fi).

37 *See Unlicensed Use of the 6 GHz Band; Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Proposed Rulemaking, FCC 18-147, ET Docket No. 18-295, GN Docket No. 17-183, ¶ 1 (rel. Oct. 24, 2018).

38 *Office of Engineering and Technology Requests Comment on Phase I Testing of Prototype U-NII-4 Devices*, Public Notice, DA No. 18-1111, ET Docket No. 13-49, Attachment A (rel. Oct. 29, 2018) (Phase I Public Notice and attached Report).

39 Report at 17.

40 *Id.* at 97.

applying any guard band or specialized filter, the Wi-Fi devices OET tested reliably protected DSRC from adjacent-channel interference in an environment with higher received Wi-Fi power levels than would likely occur in the real world. The results, which rest on a number of conservative assumptions, should reassure the Commission that Wi-Fi devices can safely operate on the first adjacent channel to DSRC if the FCC decides to segment the band.[41]

In light of these developments, four Commissioners have expressed a willingness to consider new options for the 5.9 GHz band, including reallocating it for unlicensed use.[42] The best path forward, therefore, is to adopt a wide-ranging FNPRM that seeks to determine the best way to promote utilization of this valuable and strategically located 75 megahertz of spectrum in light of recent technical developments (including the development of auto safety technologies, such as lidar and radar-based systems, that use different spectrum bands or no spectrum at all), the Commission's policy decisions in other bands, and the hundreds of billions of dollars of economic growth that would accompany opening the band for unlicensed access.[43]

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41 Comments of NCTA—The Internet & Television Association at 5–7, ET Docket No. 13-49 (filed Nov. 28, 2018) (describing the conservative assumptions that OET applied in its testing).

42 *See* Jimm Phillips & Howard Buskirk, *FCC Considering All Options on 5.9 GHz, Including Reallocation for Wi-Fi, Pai Says*, Communications Daily, Dec. 17, 2018, https://communicationsdaily.com/article/view?s=280524&p=1&id=563263; Statement of Michael O'Rielly, Commissioner, Federal Communications Commission (Oct. 16, 2018) (https://docs.fcc.gov/public/attachments/DOC-354589A1.pdf); Statement of Jessica Rosenworcel, Commissioner, Federal Communications Commission (Oct. 29, 2018) (https://docs.fcc.gov/public/attachments/DOC-354830A1.pdf); Margaret Harding McGill, *FCC's Carr Open to Using Auto Spectrum for Wi-Fi*, PoliticoPro, Oct. 18, 2018, https://subscriber.politicopro.com/tech/whiteboard/2018/10/fccs-carr-open-to-using-auto-spectrum-for-wi-fi-2096281.

43 *See* Diana Gehlhaus Carew et al., RAND Corporation, The Potential Economic Value of Unlicensed Spectrum in the 5.9 GHz Frequency Band: Insights for Future Spectrum Allocation Policy x (2018) (concluding that using the 5.9 GHz band for Wi-Fi could contribute more than $100 billion annually to GDP).

The 5GAA Petition appears to be designed to force the FCC to decide a critical issue related to the 5.9 GHz band without the benefit of considering this larger context. Deciding the fate of the top 20 megahertz of the band would necessarily remove important options from the FCC's larger proceeding. There is no compelling reason for the Commission to limit its options at this stage, when the issues are already teed up for a rulemaking.

B. The Commission has rejected the beauty contest approach to spectrum allocation that 5GAA proposes.

Even if the 5.9 GHz band were not ripe for a fresh look, the 5GAA Petition would still be ill-advised. Since the original DSRC allocation in 1999, the Commission has wisely abandoned the discredited approach of granting spectrum rights through beauty contests based on the government's predictions of specific technologies' merits, instead letting the market determine the best use of a band. DSRC provides the perfect illustration of the failure of 5GAA's beauty contest approach. Two decades later, the Commission is only now working to claw back the spectrum that DSRC failed to use. And, as the 5GAA Petition illustrates, even after twenty years the auto industry is still experimenting with vehicle-to-vehicle communication technologies and sorting out which it will adopt going forward.[44]

Despite the 5.9 GHz band's history, and the country's move away from command-and-control spectrum policy, 5GAA nonetheless asks the Commission to double down on the mistake it made with DSRC by again granting exclusive spectrum rights to *another* specific technology: C-V2X. The 5GAA Petition specifically requests the Commission to give C-V2X proponents exclusive access to valuable mid-band spectrum, without an auction or unlicensed sharing

[44] *See* 5GAA Petition at 7.

responsibilities.[45] 5GAA's proposal is especially curious because C-V2X, and its eventual 5G successor, could operate in the traditional licensed spectrum bands already set aside for LTE. Therefore, it is unclear why the FCC also would grant the technology a special subsidy in the form of exclusive access to the 5.9 GHz band. There is no consensus among auto industry stakeholders about which technology should prevail and no broader consensus that the band should be used for commercial automotive technology at all. Even General Motors agrees that "it is premature for the Commission to pick the winners and losers through the use of its spectrum allocation rules."[46] Furthermore, many questions about the efficacy and security of both DSRC and C-V2X remain unanswered. At the same time, many technologies in use on the road today and in development for autonomous vehicles use other existing commercial spectrum bands or do not use spectrum at all, such as lidar, radar, cameras and sensors.[47] The Commission should not repeat the mistake it made with DSRC by giving C-V2X the same spectrum handout, violating core principles of Commission wireless policy, and sacrificing U.S. economic growth.

IV. AN FNPRM IS THE RIGHT WAY TO DETERMINE THE FUTURE OF THE 5.9 GHZ BAND.

Rather than prematurely accepting the limited options laid out in the 5GAA Petition, the Commission should remain focused on a comprehensive solution for the future of the 5.9 GHz band that will accelerate U.S. economic growth and the next generation of broadband. All 75 megahertz—not just the 20 megahertz addressed in the 5GAA Petition—are underutilized today

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45 *See id.* at App. D-1 (asking the FCC to prohibit DSRC operations in the 5905–5925 MHz portion of the band).

46 Comments of General Motors Company at 4, GN Docket No. 18-357 (filed Jan. 18, 2019).

47 The Commission recently addressed these changing trends in auto technologies by making available an additional 4 gigahertz of spectrum for vehicular radar (from 76–77 GHz up to 81 GHz). *Amendment of Parts 1, 2, 15, 90 and 95 of the Commission's Rules to Permit Radar Services in the 76–81 GHz Band*, Report and Order, 32 FCC Rcd. 8822 (2017).

and need to be addressed. NCTA already has proposed action that would improve the entire band.[48] Even 5GAA admits that its real goal is to acquire a permanent place for C-V2X technology in the 5.9 GHz band and that it is seeking much more than 20 megahertz, rendering its waiver petition even more inappropriate.[49]

A comprehensive FNPRM, which NCTA requested in October 2018, will allow the Commission to address all of the interrelated technical, economic, and policy issues involved in finding the best use for this valuable mid-band spectrum. All interested parties should be afforded the opportunity to propose and comment on new rules for the band. 5GAA will have the opportunity to explain, for example, why C-V2X operations may need 20 megahertz of the 5.9 GHz band, as opposed to a more appropriate band—a discussion conspicuously absent from the 5GAA Petition. A rulemaking proceeding also will facilitate resolution of key technical issues, including those raised by the 5GAA Petition. For example, the C-V2X testing on which 5GAA relies used a 10-megahertz channel, rather than the 20-megahertz channel 5GAA seeks in its proposed conditions.[50] A rulemaking proceeding is the appropriate place to evaluate this and other test results.

In short, the issues related to the future of the 5.9 GHz band are ripe for resolution in a rulemaking proceeding, and the Commission can act through an FNPRM immediately while taking into account the interests of all stakeholders, including 5GAA. The best way to speed deployment in the 5.9 GHz band is to take a fresh look at the band and create a clear, stable set

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48 NCTA Ex Parte at 1.

49 *See* 5GAA Petition at 22 ("To unleash these advanced features, 5G C-V2X will need to access much more spectrum in the 5.9 GHz band than the 20 MHz that are the subject of this Waiver Request.").

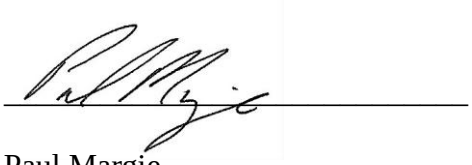
50 *Id.* at 21 n.49; *id.* at App. D-1.

of rules to govern the entire band that reflect the technological developments and improvements in spectrum efficiency that have emerged since 1999. A waiver request that addresses only part of the band risks impeding the Commission's ability to finally bring the band to meaningful use.

V. CONCLUSION

The 5GAA Petition should be treated as what it really is: a petition for rulemaking that would dramatically reshape the 5.9 GHz band. Instead of taking a piecemeal approach, the Commission should issue a "fresh look" FNPRM without delay. 5GAA's proposals can be thoroughly vetted in the FNPRM's proceedings.

Respectfully submitted,



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